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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,236	06/26/2006	Christophe Proust	13798.003.00	3053

30827 7590 05/10/2010
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EXAMINER	
PHAN, MAN U	

ART UNIT	PAPER NUMBER
2475	

MAIL DATE	DELIVERY MODE
05/10/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/584,236	PROUST ET AL.	
	Examiner	Art Unit	
	Man Phan	2475	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 December 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *31-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *31-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Response to Amendment and Argument

1. This communication is in response to applicant's 12/14/2009 Amendment in the application of Proust et al. for a "**MARKING OF A DATAGRAM TRANSMITTED OVER AN IP NETWORK AND TRANSMISSION OF ONE SUCH DATAGRAM** " filed 06/26/2006. This application is a national stage entry of PCT/FR04/03157 , International Filing date: 12/08/2004, and claims foreign priority to 0315470 , filed 12/26/2003 in France. The amendment and response has been entered and made of record. Claims 31-48 are pending in the application.

2. Applicant's remarks and argument to the rejected claims are insufficient to distinguish the claimed invention from the cited prior arts or overcome the rejection of said claims under 35 U.S.C. 103 as discussed below. Applicant's argument with respect to the pending claims have been fully considered, but they are not persuasive for at least the following reasons.

3. In response to Applicant's argument that the reference does not teach or reasonably suggest the functionality upon which the Examiner relies for the rejection. The Examiner first emphasizes for the record that the claims employ a broader in scope than the Applicant's disclosure in all aspects. In addition, the Applicant has not argued any narrower interpretation of the claim limitations, nor amended the claims significantly enough to construe a narrower meaning to the limitations. Since the claims breadth allows multiple interpretations and meanings, which are broader than Applicant's disclosure, the Examiner is required to interpret

the claim limitations in terms of their broadest reasonable interpretations while determining patentability of the disclosed invention. See MPEP 2111. In other words, the claims must be given their broadest reasonable interpretation consistent with the specification and the interpretation that those skilled in the art would reach. See *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000), *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999), and *In re American Academy of Science Tech Center*, 2004 WL 1067528 (Fed. Cir. May 13, 2004). Any term that is not clearly defined in the specification must be given its plain meaning as understood by one of ordinary skill in the art. See MPEP 2111.01. See also *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989), *Sunrace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003), *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298 67 USPQ2d 1132, 1136 (Fed. Cir. 2003). The interpretation of the claims by their broadest reasonable interpretation reduces the possibility that, once the claims are issued, the claims are interpreted more broadly than justified. See *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).* Therefore, the failure to significantly narrow definition or scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims in parallel to the Applicant in the response and reiterates the need for the Applicant to distinctly define the claimed invention.

4. In response to Applicant's argument that there is no suggestion to combine the references, i.e., Tappan (US#6,473,421) and Ryu et al. (US#6,791,949) as proposed in the office action. The Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Since no substantial amendments have been made and the Applicant's arguments are not persuasive, the claims are drawn to the same invention and the text of the prior art rejection can be found in the previous Office Action. Therefore, the Examiner maintains that the references cited and applied in the last office actions for the rejection of the claims are maintained in this office action.

Claim Rejections - 35 USC ' 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 31-34, 38-42 and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tappan (US#6,473,421) in view of Ryu et al. (US#6,781,949).

Regarding claim 31, the reference disclose methods and system for forwarding datagram in a IP communications network, according to the essential features of the claims. Tappan discloses a method of marking a datagram (FIG .5 shows IP datagram tag and labeled see col. 3 lines 33-41) transmitted in a communications network comprising routers interconnected (Internetwork communications based on operations of routers see col. 1 lines 9-11) by transmission links from a datagram source terminal (FIG. 6 depicts transmission of a packet from a source router S) connected to a first router (FIG.6 shows I-ASBR) of the network to a datagram destination (FIG. 6 depicts a destination node D) terminal connected to a second router (FIG.6 shows E-ASBR) of the network (FIG. 6 depicts transmission of a packet from a source router S

to a destination node D. The forwarding path passes through a routing domain 44 to which neither S nor D belongs see coin: 5 lines 46-49) the datagram comprising a vector formed of ordered fields each containing a reference the method comprising the following steps executed when a router receives the datagram (when a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it reads that route's fields that specify the interface over which it should forward the packet see col :2 lines 28-35): Reading a value in the index field of the datagram; reading the reference contained in the field of the vector of the datagram designated by the read index value (the IP process inspects the IP datagram's header 38, and in particular its IP destination-address field. That field's contents identify the host system to which the datagram's contents are to be directed see, the datagram further comprising a vector index field, and each router having a table of references (a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it reads that route's fields that specify the interface over which it should forward the packet and the link-layer address of the router to which the interface should send the packet for further forwarding see coin:2 lines 28-35); and forwarding the datagram to a next router of the network (Routers inform other routers of the host systems to which they can forward communications packets, and they employ such information obtained from other touters to populate their forwarding tables see col :2 lines 6-10 also when a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding

table, it reads that route's fields that specify the interface over which it should forward the packet see col: 2 lines 28-35).

However, Tappan does not disclose expressly wherein if the table of the router does not contain the read reference, writing a reference selected in the table of the router into the field of the vector of the datagram designated by the read index value; writing into the index field of the datagram a value equal to the read value incremented by one unit. In the same field of endeavor, Ryu et al teach if the table of the router does not contain the read reference (A node's Route Table entry contains primary and secondary routes to reach it, with respect to a plurality of Quality of Service (QoS) routing metrics (i.e., such as bandwidth and delay). Routes are represented by the "next hop address" (gateway node) through which the node can be reached and the level of QoS that the route is capable of supporting see coin: 3 lines 2-8) writing a reference selected in the table of the router into the field of the vector of the datagram designated by the read index value writing into the index field (if the RUR transmitter is not currently listed as the primary or secondary gateway, and if the RUR represents an improvement over the existing primary gateway entry, then the primary gateway information is moved to the secondary fields and the RUR transmitter and associated metric data from the RUR is written into the primary gateway fields, Otherwise, if the RUR represents an improvement over the existing secondary gateway entry, then the RUR transmitter and associated metric data from the RUR is written into the secondary gateway fields see coln:18 lines 46-56)

Of the datagram a value equal to the read value incremented by one unit (The LQ filter value is incremented for each received packet and decremented for each missed packet. Missed packets are detected using the transmitter sequence number (last received and current received

sequence numbers). In one illustrative embodiment the increment and decrement values can be set for an expected link throughput (i.e., setting the increment and decrement values to 1 and 3 respectively will result in a stable LQ value if the link is operating at 75%) see coln:24 lines 44-51). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Ryu et al in the system of Tappan The method of Tappan can be implemented on any type of method if the table of the router does not contain the read reference, writing a reference selected in the table of the router into the field of the vector of the datagram designated by the read index value; writing into the index field of the datagram a value equal to the read value incremented by one unit which is taught by Ryu et al with a motivation in order to provide a network protocol which is capable of rapidly adapting to network changes.

Regarding claim 32, note that Tappan discloses the method, wherein the references contained in the table of references of the router are associated with respective routes in the network (When a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it reads that route's fields that specify the interface over which it should forward the packet and the link-layer address of the router to which the interface should send the packet for further forwarding see col: 2 lines 28-35).

Regarding claim 33, Note that Tappan discloses the method of, wherein the table of references of the router is a portion of a routing table of the router, the portion corresponding to a single destination prefix contained in the routing table (When a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it

reads that route's fields that specify the interface over which it should forward the packet and the link-layer address of the router to which the interface should send the packet for further forwarding see col: 2 lines 28- 35).

Regarding claim 34, note that Tappan discloses the method, wherein the datagram belongs to a flow of datagrams sent successively by the source terminal (FIG. 6 depicts transmission of a packet from a source router S) to the destination terminal (FIG. 6 depicts a destination node D), and wherein the read reference is identical to a reference written by the router at the time of forwarding an earlier datagram of the flow (setting the Forwarding Address field to ABR2's address, and placing in the MPLS Label field a label value, say, T6, that identifies the location of ABR2's forwarding-table entry that tells where to forward packets destined for E-ASBR. ABR2 must then decide into which areas to flood the thus-generated LSA. (Since it is originating a new LSA, it also puts its own ID in the Adverting Router field.)See col9 lines 24-31)

Regarding claim 38, Note that Tappan discloses a method of forwarding a datagram by a router of a communications network (Internetwork communications based on operations of routers see col :1 lines 9-11), the router having a table of references associated with respective routes between the router and a destination terminal of the datagram connected to the network (network is a geographically distributed collection of interconnected subnetworks, such as local area networks (LAN), that transport data between network nodes The network topology is defined by an arrangement of network nodes that communicate with one another, typically through one or more intermediate network nodes, such as routers and switches see col :1 lines 22-26)., the forwarding method comprising the following steps: on reception of the datagram by

the router, reading a reference in the datagram; and looking up the read reference in the table of references of the router (each ABR(area border router) maintains a separate LSDB for each of its routing areas. In operation, network nodes in a routing area "flood" LSAs (link-state data base) to ensure that every node in that area populates its LSDB with the same set of routing and topology information see col: 5 lines 3-7), if the table contains the read reference, forwarding the datagram along the route associated with the read reference, if not, selecting a reference in the table and forwarding the datagram along the (when a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it reads that route's fields that specify the interface over which it should forward the packet see col :2 lines 28-35) route associated with the selected reference; in which method the read reference was written beforehand into the datagram using the marking method of.

Regarding claim 39, Note that Tappan discloses the method, wherein the reference selected in the table of references of the router is also written into the datagram (when a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it reads that route's fields that specify the interface over which it should forward the packet see col :2 lines 28-35) using the marking method of.

Regarding claim 40, Note that Tappan The method, wherein the table of references is associated with a single destination prefix contained in a routing table of the router (prefixes may be aggregated as a single address prefix 128.52.10.0/24 which contains both IP address ranges see col :2 lines 50-52).

Regarding claim 41, Note that Tappan discloses the method, comprising the following steps executed at the time of reception of the datagram by the router before looking up the read reference in the table of references of the router (each ABR(area border router) maintains a separate LSDB for each of its routing areas. In operation, network nodes in a routing area "flood" LSAs (link-state data base) to ensure that every node in that area populates its LSDB with the same set of routing and topology information see col: 5 lines 3-7), reading a destination address in the datagram; and selecting in the routing table of the router the longest destination prefix corresponding to the read destination address, the table of references of the router in which the reference read in the datagram is then looked up being associated with the selected destination prefix (Two or more address prefixes may be aggregated if they specify contiguous ranges of network addresses or if one prefix's range of addresses is a superset of the other prefixes see col :2 lines 40- 42)., the table of references of the router in which the reference read in the datagram is then looked up being associated with the selected destination prefix (For example, consider the address prefixes 128.52.10.0/24 and 128.52.10.5/30. Since the prefix 128.52.10.0/24 includes every IP address in the subnet work described by the prefix 128.52.10.5/30, the two prefixes may be aggregated as a single prefix 128.52.10.0/24 see col :2 lines 43-47)

Regarding claim 42, Note that Tappan discloses The method of, wherein the table of references further comprises, for each reference of the table (when a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it reads that route's fields that specify the interface over which it should forward the packet see col :2 lines 28-35), a load value assigned to the route associated with the reference (Each

switch associates a local virtual path/virtual channel indicator (VPI/VCI) with a channel or path that runs through it. When an ATM switch receives a cell, it consults the cell's VPI/VCI field to identify by table lookup the interface through which to forward the cell. It also replaces that field's contents with a value indicated by the table as being the next switch's code for that path or channel, and it sends the resultant cell to the next switch see coin: 4 lines 1-9). and wherein the selected reference corresponds to a minimum load value of the routes associated with references contained in the table of references (When a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it reads that route's fields that specify the interface over which it should forward the packet and the link-layer address of the router to which the interface should send the packet for further forwarding see col: 2 lines 28-35).

Regarding claim 46 Tappan discloses a router (FIG. 6 depicts transmission of a packet from a source router S) comprising: means for reading a value in a vector index field of a datagram received by the router; means for reading a reference contained in a vector field of the datagram designated by the read index value (the IP process inspects the IP datagram's header 38, and in particular its IP destination-address field. That field's contents identify the host system to which the datagram's contents are to be directed see, the datagram further comprising a vector index field, and each router having a table of references (a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it reads that route's fields that specify the interface over which it should forward the packet and the

link-layer address of the router to which the interface should send the packet for further forwarding see coin: 2 lines 28-35) means for storing a table of references; means for associating references in the table with routes (When a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it reads that route's fields that specify the interface over which it should forward the packet and the link-layer address of the router to which the interface should send the packet for further forwarding see col: 2 lines 28-35); means for looking up a read reference in the table of references of the router, adapted to command forwarding of the datagram along the route associated with the read reference if the table of references contains the read reference(In addition to other information, each entry includes a label, which is an index into the forwarding table of the label-switching router that receives it. When a router receives such a packet, it consults the forwarding-table entry that the label specifies and replaces that label with a replacement label that the specified forwarding-table entry contains. That replacement label is typically one that the next router on the path to the requested destination has asked to be included in packets sent to it and intended for the destination with which the forwarding table is associated see coin:3 lines 6-16) means for selecting a reference in the table of references, adapted to be activated if the table of references does not contain the read reference and to command forwarding of the datagram along the route associated with the selected reference (When an ATM switch receives a cell, it consults the cell's VPI/VCI field to identify by table lookup the interface through which to forward the cell. It also replaces that field's contents with a value indicated by the table as being the next switch's code for that path or channel, and it sends the resultant cell to the next switch. In other words, the

function performed by the VPI/VCI field enables it to serve as the stack's top label see col:4 lines 3-10) ; and Tappan does not disclose means for writing a value equal to the read value incremented by one unit into the index field of the datagram. Ryu et al from the same or similar endeavor teach (The LQ filter value is incremented for each received packet and decremented for each missed packet. Missed packets are detected using the transmitter sequence number (last received and current received sequence numbers). In one illustrative embodiment the increment and decrement values can be set for an expected link throughput (i.e., setting the increment and decrement values to 1 and 3 respectively will result in a stable LQ value if the link is operating at 75%) see coln:24 lines 44-51). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Ryu et al in the system of Tappan The method of Tappan can be implemented on any type of method means for writing a value equal to the read value incremented by one unit into the index field of the datagram which is taught by Ryu et al with a motivation in order to provide a network protocol which is capable of rapidly adapting to network changes.

Regarding claim 47, Tappan discloses the router (FIG. 6 depicts transmission of a packet from a source router S). Tappan disclose all the subject matter with the exception of further comprising means for writing the selected reference into the vector field of the datagram designated by the read index value. Ryu et al from the same or similar field of endeavor teach further comprising means for writing the selected reference into the vector field of the datagram designated by the read index value (The LQ filter value is incremented for each received packet and decremented for each missed packet. Missed packets are detected using the transmitter sequence number (last received and current received sequence numbers). In one illustrative

embodiment the increment and decrement values can be set for an expected link throughput (i.e., setting the increment and decrement values to 1 and 3 respectively will result in a stable LQ value if the link is operating at 75%) see coln:24 lines 44-51)

Thus it would have been obvious to one of ordinary skill in the art to implement the method of Ryu et al in the system of Tappan The method of Tappan can be implemented on any type of method further comprising means for writing the selected reference into the vector field of the datagram designated by the read index value which is taught by Ryu et al with a motivation in order to provide a network protocol which is capable of rapidly adapting to network changes.

Regarding claim 48, note that Tappan discloses the router (FIG. 6 depicts transmission of a packet from a source router S), wherein the association means are included in means for calculating a routing table of the router, the calculation means belonging to a control unit of the router (the router installs that LSA in a topological- information base from which it calculates its forwarding table. If the router is an area border router of the type that the illustrated embodiment employs, it additionally originates a filtered version of that LSA, as will be described presently see coin:8 lines 31-36) the association means being further adapted to associate a table of references with a single destination prefix contained in the routing table of the router, the table of references (When a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it reads that route's fields that specify the interface over which it should forward the packet and the link-layer address of the router to which the interface should send the packet for further forwarding see col: 2 lines 28- 35). of the

router comprising, for each reference in the table, a load value assigned to the route associated with the reference (Each switch associates a local virtual path/virtual channel indicator (VPINCl) with a channel or path that runs through it. When an ATM switch receives a cell, it consults the cell's VPI/VCI field to identify by table lookup the interface through which to forward the cell. It also replaces that field's contents with a value indicated by the table as being the next switch's code for that path or channel, and it sends the resultant cell to the next switch see coin: 4 lines 1-9); and the reference selection means being adapted to select the reference for which the route corresponds to a minimum load value (when a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it reads that route's fields that specify the interface over which it should forward the packet and the link-layer address of the router to which the interface should send the packet for further forwarding see col: 2 lines 28-35).

8. Claims 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tappan (US#6,473,421) in view of Ryu et al (US#6,791,949) as applied in claim 31 above, and further in view of Ofek et al. (US#7,343,619).

Regarding claim 35, note that Tappan discloses the method of, wherein the datagram belongs to a forward flow of datagrams sent successively by the source terminal (FIG. 6 depicts transmission of a packet from a source router S) to the destination terminal (FIG. 6 depicts a destination node D), the forward flow relating to a communication session,, sent by the terminal receiving forward flow datagrams and received by the terminal sending forward flow datagrams

before sending the forward flow datagram (The top label is the label that the ABR has been requested to place in packets being sent to the destination that the LSA's Forwarding Address field specifies. The next label is the one that the LSA's MPLS Label field specifies. In this case, ABR1 uses as the top label a value, T5, that TR0 has asked it, in a TDP message, to use in packets sent to TR0 for forwarding to the router, ABR2, identified in the AS-External LSA's Forwarding Address field see coin: 11 lines 3-9),

Tappan and Ryu et al does not disclose wherein the datagram further comprises an additional vector formed of fields that are intended to receive references written into the fields of a vector of a backward flow datagram relating to the communication session. Ofek et al from the same or similar endeavor teach (the result of the sequential checks by the sequence of TTCs is validation that the sequence data packets with the sequence of security tag vectors 711 have been transmitted over a predefined communications path or route in the network 150. In general, the communications path includes second computing element, third computing element and so on, each of which has the TTC 120TTC functionality (as was described in detail in FIG. 9 and FIG. 11) capable of validating that the sequence data packets with the sequence of security tag vectors 711 have been transmitted over a predefined communications path or route in the network 150 see coln:34 lines 30-41). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Ofek et al in the system of Tappan and Ryu et alThe method of Tappan and Ryu et al can be implemented on any type of method wherein the datagram further comprises an additional vector formed of fields that are intended to receive references written into the fields of a vector of a backward flow datagram relating to the

communication session which is taught by Ofek et al with a motivation in order to provide a trusted flow of packets.

Regarding claim 36, Tappan and Ryu et al disclose the method (Tappan: FIG .5 shows IP datagram tag and labeled see col :3 lines 33-41). Tappan and Ryu et al disclose all the subject matter with exception of wherein initial references are written by the source terminal into the fields of the vector of the forward flow datagram the initial references being respectively identical to references contained in fields of an additional vector of the backward flow datagram. Ofek et al from the same or similar field of endeavor teach wherein initial references are written by the source terminal into the fields of the vector of the forward flow datagram (FIG. 28 is a functional description of a system that generates and sends data packets with security tag vectors over IP (Internet protocol) VPN (virtual private network) connection through a network interface, e.g., firewall, classifier, and policer, while mapping data packets with verified security tag vectors to premium service see coin:9 lines 34-40) the initial references being respectively identical to references contained in fields of an additional vector of the backward flow datagram (the result of the sequential checks by the sequence of TTCs is validation that the sequence data packets with the sequence of security tag vectors 711 have been transmitted over a predefined communications path or route in the network 150. In general, the communications path includes second computing element, third computing element and so on, each of which has the TTC 120TTC functionality (as was described in detail in FIG. 9 and FIG. 11) capable of validating that the sequence data packets with the sequence of security tag vectors 711 have been transmitted over a predefined communications path or route in the network 150 see coin: 34 lines 30-41).

Thus it would have been obvious to one of ordinary skill in the art to implement the method of Ofek et al in the system of Tappan and Ryu et al. The method of Tappan and Ryu et al can be implemented on any type of method wherein initial references are written by the source terminal into the fields of the vector of the forward flow datagram the initial references being respectively identical to references contained in fields of an additional vector of the backward flow datagram which is taught by Ofek et al with a motivation in order to provide a trusted flow of packets.

Regarding claim 37, Note that Tappan discloses the method, wherein the forward flow datagram further comprises a vector length field that is intended to receive the last value written into the index field of the backward flow datagram (a length field 524 and a value field 526. The type field 522 indicates what type of information is stored in the value field 526. The length field 524 identifies the length, usually in octets, of the TLV 520. The value field 526 stores the specific value transported by the TLV see col: 11 lines 13-16 and FIG.5).

9. Claims 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tappan (US# 6,473,421) in view of Ofek et al (US# 7,343,619).

Regarding claim 43, Tappan discloses a terminal (FIG. 6 depicts transmission of a packet from a source router S) comprising: means for producing a datagram to be sent by the terminal (FIG. 6 depicts transmission of a packet from a source router S to a destination node D. The forwarding path passes through a routing domain 44 to which neither S nor D belongs see coin: 5 lines 46-49) the datagram comprising an ordered field vector and a vector index field; means for writing an initial reference into each field of the vector of the datagram to be sent by the terminal

(when a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it reads that route's fields that specify the interface over which it should forward the packet see col :2 lines 28-35) and;

Tappan discloses all the subject matter of the claimed invention with the exception of means for writing an initial value into the index field of the datagram to be sent by the terminal. Ofek et al from the same or similar endeavor teach means for writing an initial value into the index field of the datagram to be sent by the terminal (the corresponding header fields are computed, the header is assembled, and the corresponding data bytes appended as a payload. If the TCP layer entity has to acknowledge the reception of data bytes along the other direction of the TCP connection, the acknowledgement information is added and put inside the corresponding TCP header fields 1840. In the preferred embodiment the acknowledgment information consists of an Acknowledgement number that identifies the last in-sequence byte received, and an ACK bit flag that indicates that the acknowledgement number field contains a valid value coln:31 lines 2-67 and coln:32 lines 1-2). Thus it would have been obvious to one of ordinary skill in the art to implement the method of Ofek et al in the system of Tappan and The method of Tappan and can be implemented on any type of method means for writing an initial value into the index field of the datagram to be sent by the terminal which is taught by Ofek et al with a motivation in order to provide a trusted flow of packets.

Regarding claim 44, Tappan disclose all the subject matter of claimed invention with the exception of the terminal of, further comprising: means for reading second references in fields of an additional vector contained in a datagram received by the terminal; and means for storing the

second references with communication session context data of the received datagram in a communication session context table of the terminal, wherein the initial reference written into each field of the vector of the datagram, to be sent by the terminal is one of the second references read in a field of the additional vector of the received datagram when the datagram to be sent belongs to the communication session of the received datagram. Ofek et al teach from the same or similar endeavor teach the terminal, further comprising: means for reading second references in fields of an additional vector contained in a datagram received by the terminal (the result of the sequential checks by the sequence of TTCs is validation that the sequence data packets with the sequence of security tag vectors 711 have been transmitted over a predefined communi cations path or route in the network 150. In general, the communications path includes second computing element, third computing element and so on, each of which has the TTC 120TTC functionality (as was described in detail in FIG. 9 and FIG. 11) capable of validating that the sequence data packets with the sequence of security tag vectors 711 have been transmitted over a predefined communications path or route in the network 150 see coln:34 lines 30-41); and means for storing the second references with communication session context data of the received datagram in a communication session context table of the terminal, wherein the initial reference written into each field of the vector of the datagram (the corresponding header fields are computed, the header is assembled, and the corresponding data bytes appended as a payload. If the TCP layer entity has to acknowledge the reception of data bytes along the other direction of the TCP connection, the acknowledgement information is added and put inside the corresponding TCP header fields 1840. In the preferred embodiment the acknowledgment information consists of an Acknowledgement number that identifies the last in-sequence byte

received, and an ACK bit flag that indicates that the acknowledgement number field contains a valid value coln:31 lines 2-67 and coln:32 lines 1-2) to be sent by the terminal is one of the second references read in a field of the additional vector of the received datagram when the datagram to be sent belongs to the communication session of the received datagram(FIG. 28 illustrates a system that generates and sends data packets with security tag vectors 711 over IP (Internet protocol) VPN (virtual private network) connection 2810 through a network interface, e.g., firewall, classifier, and policer, while mapping data packets with verified security tag vectors 111 to premium service see coln:39 lines 12-17).

Thus it would have been obvious to one of ordinary skill in the art to implement the method of Ofek et al in the system of Tappan and The method of Tappan and can be implemented on any type of method the terminal of, further comprising: means for reading second references in fields of an additional vector contained in a datagram received by the terminal; and means for storing the second references with communication session context data of the received datagram in a communication session context table of the terminal, wherein the initial reference written into each field of the vector of the datagram, to be sent by the terminal is one of the second references read in a field of the additional vector of the received datagram when the datagram to be sent belongs to the communication session of the received datagram which is taught by Ofek et al with a motivation in order to provide a trusted flow of packets.

Regarding claim 45, Tappan discloses modified by ofek et al teach a terminal (Tappan: FIG. 6 depicts transmission of a packet from a source router S), wherein the means for producing the datagram (Tappan : FIG. 6 depicts transmission of a packet from a source router S to a destination node D. The forwarding path passes through a routing domain 44 to which neither S

nor D belongs see coin: 5 lines 46-49) to be sent are such that the datagram to be sent further comprises an additional field vector (Ofek et al :the result of the sequential checks by the sequence of TTCs is validation that the sequence data packets with the sequence of security tag vectors 711 have been transmitted over a predefined communications path or route in the network 150. In general, the communications path includes second computing element, third computing element and so on, each of which has the TTC 120TTC functionality (as was described in detail in FIG. 9 and FIG. 11) capable of validating that the sequence data packets with the sequence of security tag vectors 711 have been transmitted over a predefined communications path or route in the network 150 see coln:34 lines 30-41), the terminal further comprising: means for reading first references in fields of a vector contained in the received datagram (Tappan : when a router receives an IP datagram, it searches through the prefix entries in the forwarding table to find the longest prefix that matches the incoming packet's destination address. When it finds that route in its forwarding table, it reads that route's fields that specify the interface over which it should forward the packet see col :2 lines 28-35); means for storing the first references in the table of communication session contexts of the terminal with the communication session context data of the received datagram (the result of the sequential checks by the sequence of TTCs is validation that the sequence data packets with the sequence of security tag vectors 711 have been transmitted over a predefined communications path or route in the network 150. In general, the communications path includes second computing element, third computing element and so on, each of which has the TTC 120TTC functionality (as was described in detail in FIG. 9 and FIG. 11) capable of validating that the sequence data packets with the sequence of security tag vectors 711 have been transmitted over a predefined

communications path or route in the network 150 see coln:34 lines 30-41); and means for writing the first references into the fields of the additional vector of the datagram to be sent by the terminal when the datagram to be sent belongs to the communication session of the datagram received (Ofek et al : the corresponding header fields are computed, the header is assembled, and the corresponding data bytes appended as a payload. If the TCP layer entity has to acknowledge the reception of data bytes along the other direction of the TCP connection, the acknowled gement information is added and put inside the corresponding TCP header fields 1840. In the preferred embodiment the acknowledgment information consists of an Acknowledgement number that identifies the last in-sequence byte received, and an ACK bit flag that indicates that the acknowledgement number field contains a valid value coln:31 lines 2-67 and coln:32 lines 1-2).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Song et al. (US#2009/0028081) is cited to show the digital broadcasting system and data processing method.

The Song et al. (US#2009/0034442) is cited to show the digital broadcasting system and data processing method.

The Carlucci et al. (US#2004/0244058) is cited to show the programming content processing and management system and method.

The Feldman et al. (US#6,055,561) is cited to show the mapping of routing traffic to switching networks.

The Yoon et al. (US#2008/0008155) is cited to show the method and apparatus for decoding MPE-FEC frame in DVB-H system.

The Gubbi et al. (US#7,644,343) is cited to show the error resilience methods for multi-protocol encapsulation forward error correction implementations.

The Eriksson et al. (US#2010/0027541) is cited to show the efficient MBMS backbone distribution using one tunnel approach.

The Yosef et al. (US#2005/0259682) is cited to show the broadcast system.

11. **THIS ACTION THIS ACTION IS MADE FINAL**. See MPEP ' 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton, can be reached on (571) 272-3171. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

May 04, 2010

/Man Phan/

Primary Examiner, Art Unit 2475